

CLAIMS:

1. A fluid mixing venturi comprising;
a venturi barrel,
a constriction region inside said venturi barrel,
5 a fluid outlet nozzle located by nozzle location means at a central region in said venturi barrel for discharging a fluid into a fluid flowing through said venturi barrel, and
a booster tube having an inlet rim and an outlet rim and located by booster tube location means with said inlet rim positioned in the vicinity of or downstream of an outlet of said fluid nozzle, so as to surround a fluid flowing from said nozzle.
- 10 2. A fluid mixing venturi according to claim 1, wherein said venturi barrel is of cylindrical shape, and said fluid outlet nozzle is provided substantially at the center thereof, and said booster tube is of an annular shape and is positioned coaxial with said venturi barrel in the vicinity of said nozzle so as to surround fluid flowing therefrom.
- 15 3. A fluid mixing venturi according to claim 2, wherein said venturi barrel is formed with flow deflection means comprising a recessed step in a wall of said venturi barrel downstream of said constriction.
4. A fluid mixing venturi according to claim 3, wherein said outlet rim of said booster tube is formed with outlet flow deflection means formed by flaring said outlet rim outwards.
- 20 5. A fluid mixing venturi according to claim 4, wherein a flare angle of said outlet flow deflection means is formed with a similar angle to said recessed step.
6. A fluid mixing venturi according to any one of claim 3 through claim 5, wherein said booster tube is positioned in said venturi barrel with said outlet rim in the vicinity of a plane containing said recessed step.

7. A fluid mixing venturi according to either one of claim 1 and claim 2, wherein said outlet rim of said booster tube is formed with outlet flow deflection means formed by flaring said outlet rim outwards.
8. A fluid mixing venturi according to any one of claim 1 through claim 7, wherein a ratio of a radius of said booster tube to a radius of said venturi bore is within a range from 0.50 to 0.65.
9. A fluid mixing venturi according to any one of claim 1 through claim 8, wherein one or more of an upper and lower section for said venturi barrel, a fluid supply assembly including said nozzle, and a booster tube assembly including said booster tube location means are molded from plastics.
10. A method of manufacturing a fluid mixing venturi according to claim 9, involving:
fitting said fluid supply assembly to said upper section,
fitting said booster tube assembly to said upper or lower section,
fitting said upper and lower sections together and
welding said upper and lower sections to make up a complete assembly.
11. A method of increasing signal and improving fluid mixing/atomization of a fluid mixing venturi comprising; a venturi barrel, a constriction region inside said venturi barrel, and a fluid outlet nozzle located by nozzle location means at a central region in said venturi barrel for discharging a fluid into a fluid flowing through said venturi barrel, said method involving: locating a booster tube with an inlet rim thereof positioned in the vicinity of or downstream of an outlet of said fluid outlet nozzle so as to surround a fluid flowing from said nozzle.